

CLAIM LISTING

Claim 1 (Currently Amended): A process for preparing an implant for controlled release of a bioactive agent *in vivo* comprising a polymer fiber loaded with one or more bioactive agents, said process comprising a wet spinning technique having the steps of:

- a) providing a polymer, a first solvent and a second solvent, wherein the polymer is soluble in the first solvent and insoluble in the second solvent, and wherein the first solvent is miscible with the second solvent and immiscible with water;
- b) providing a solution of the polymer in the first solvent;
- c) adding an aqueous solution of the bioactive agent to the polymer solution to form an emulsion;
- d) immersing the emulsion in the second solvent by injecting the emulsion through a nozzle into the second solvent;
- e) allowing the first solvent to migrate into the second solvent to form a solid polymer fiber ~~loaded with~~ having the bioactive agent homogenously distributed within the polymer fiber;
- and
- f) shaping the polymer fiber into an implant.

Claim 2 (Previously Presented): The process according to claim 1, wherein the polymer is biocompatible and biodegradable.

Claim 3 (Previously Presented): The process according to claim 2, wherein the polymer is an amphiphilic block copolymer, comprising hydrophilic blocks and hydrophobic blocks.

Claim 4 (Previously Presented): The process according to claim 3, wherein the polymer is a copolymer comprising a polyalkylene glycol and an aromatic ester.

Claim 5 (Previously Presented): The process according to claim 1, wherein the bioactive agent is selected from the group consisting of antimicrobial agents, anti-viral agents, anti-tumor agents, immunogenic agents, lipids, lipopolysaccharides, hormones and growth factors.

Claim 6 (Previously Presented): The process according to claim 1, wherein the bioactive agent is selected from the group consisting of peptides, oligopeptides, polypeptides and proteins.

Claim 7 (Cancelled)

Claim 8 (Previously Presented): The process according to claim 1, wherein the first solvent has a greater solubility in the second solvent when the polymer is dissolved in the first solvent.

Claim 9 (Previously Presented): The process according to claim 1, wherein the emulsion is immersed into the second solvent by injecting through a syringe or an extruder.

Claim 10 (Previously Presented): A polymer loaded with one or more bioactive agents according to claim 1.

Claim 11 (Previously Presented): A polymer loaded with one or more bioactive agents according to claim 9.

Claim 12 (Previously Presented): A bioactive agent loaded polymer according to claim 10, wherein said bioactive agent is a peptide, oligopeptide, polypeptide or protein.

Claim 13 (Original): A process for bonding fibers according to claim 1 to form a fibrous mesh, wherein the fibers are collected and are bonded together by use of a suitable solvent mixture.

Claim 14 (Original): A fibrous mesh obtainable by a process according to claim 13.

Claim 15 (Previously Presented): The process according to claim 1, wherein the implant is a carrier for controlled drug release or a scaffold for tissue engineering.

Claim 16 (Previously Presented): The process according to claim 13, wherein the fibrous mesh is a carrier for controlled drug release or a scaffold for tissue engineering.